



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/708,391	02/27/2004	Jan LUNDGREN	07589.0156.PCUS00	2390
28694	7590	10/25/2006	EXAMINER	
NOVAK DRUCE & QUIGG, LLP 1300 EYE STREET NW 400 EAST TOWER WASHINGTON, DC 20005		JIMENEZ, MARC QUEMUEL		
		ART UNIT		PAPER NUMBER
		3726		

DATE MAILED: 10/25/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/708,391	LUNDGREN, JAN	
	Examiner Marc Jimenez	Art Unit 3726	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) Responsive to communication(s) filed on 03 October 2006.
- 2a) This action is **FINAL**. 2b) This action is non-final.
- 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) Claim(s) 1-5 and 10-20 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) Claim(s) _____ is/are allowed.
- 6) Claim(s) 1-5 and 10-20 is/are rejected.
- 7) Claim(s) _____ is/are objected to.
- 8) Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) The specification is objected to by the Examiner.
- 10) The drawing(s) filed on _____ is/are: a) accepted or b) objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 - a) All b) Some * c) None of:
 1. Certified copies of the priority documents have been received.
 2. Certified copies of the priority documents have been received in Application No. _____.
 3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) Notice of References Cited (PTO-892)
- 2) Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date 4-24-06.
- 4) Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) Notice of Informal Patent Application
- 6) Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. **Claims 1, 2, 4, 5, 11-14 and 18-20** are rejected under 35 U.S.C. 103(a) as being unpatentable over Dimberg (US1641745) in view of Havard et al. (US5483034).

Dimberg teaches a method for manufacturing a stator or rotor component having at least one airfoil-shaped, blade-type wall element **2** for guiding a gas flow that is joined together with at least one ring element **3**, the method comprising welding the edge of the airfoil-shaped, blade-type wall element **2** of the stator or rotor component firmly on the ring element of the stator or rotor component **3**, at a position radially aligned with the wall element **2** and in such a way that the joined-together portions of the wall element **2** and the ring element **3** form a T-shaped joint.

Dimberg teaches the invention cited above with the exception of laser-welding the wall to the ring element and from an opposite side of the ring element.

Havard et al. teach laser-welding (col. 2, line 58) a wall element **2** to an outer element **1** from an opposite side of the outer element (abstract, last two lines).

Therefore, it would have been obvious to one of ordinary skill in the art, at the time of the invention, to have provided the invention of Dimberg with laser-welding the wall to the ring element from an opposite side of the ring element, in light of the teachings of Havard et al., in order to provide a faster and more efficient welding technique and in order to provide a more secure weld.

Regarding claim 2, the wall elements **2** of Dimberg are joined together with the ring element **3** at a mutual spacing in a peripheral direction.

Regarding claim 4, Dimberg also teaches an inner ring **4**.

Regarding claim 5, since Dimberg has an inner ring **4** and outer ring **3**. Dimberg teaches a plurality of ring elements.

Regarding claims 11 and 12, Dimberg teaches the structure of the component as claimed and therefore is considered to meet the limitations pertaining to guiding gas flow, transmitting load and is configured for utilization in a gas turbine or jet engine.

Regarding claims 13, 14 and 18, Dimberg teaches that the wall elements **2** form a strut for transmitting load and are joined together with the ring at mutual spacing.

3. **Claims 3-5, 10 and 15-17** are rejected under 35 U.S.C. 103(a) as being unpatentable over Dimberg in view of Havard et al. as applied to claim 1 above, and further in view of Doran (US2347034).

Dimberg/Havard et al. teach the invention cited above with the exception of a plurality of ring elements being joined together to form a ring.

Doran teaches a plurality of ring elements **15,16** to form a ring.

It would have been obvious to one of ordinary skill in the art, at the time of the invention, to have provided the invention of Dimberg/Havard et al. with a plurality of ring elements being joined together to form a ring, in light of the teachings of Doran, in order to provide ring elements that can be selectively repaired in sections. It would have been obvious to one of ordinary skill in the art, at the time of the invention, to have made the one piece ring of Dimberg into multiple pieces, since it has been held that constructing a formerly integral structure in various elements involves only routine skill in the art. *Nerwin v. Erlichman*, 168 USPQ 177, 179.

Havard et al. teach multiple rings which is considered to meet the limitations pertaining to a plurality of ring elements forming the ring elements as claimed. Alternatively, it would have been obvious to one of ordinary skill in the art, at the time of the invention, to have made the one piece ring of Havard et al. into multiple pieces in order to provide selectively repairable portions and since it has been held that constructing a formerly integral structure in various elements involves only routine skill in the art. *Nerwin v. Erlichman*, 168 USPQ 177, 179. Also, it would have been obvious to one of ordinary skill in the art, at the time of the invention, to have provided the invention of Dimberg/Havard et al. with a plurality of ring elements being joined together to form a ring, in light of the teachings of Doran, in order to provide ring elements that can be selectively repaired in sections.

Dimberg/Havard et al. teach the invention cited above with the exception of having a hollow blade.

Doran teaches a hollow blade (figure 5).

Therefore, it would have been obvious to one of ordinary skill in the art, at the time of the invention, to have provided the invention of Dimberg/Havard et al. with a hollow blade, in light of the teachings of Doran, in order to provide blades having the desired air flow characteristics.

Response to Arguments

4. Applicant's arguments filed 10-3-06 have been fully considered but they are not persuasive.
5. Applicant argues that the laser welding process disclosed by Havard et al. would not be suitable for use in fastening a strut wall to the outer or inner ring since it will be subjected to higher thermal and structural loads during operation. However, Havard et al. teach in col. 4, lines 17-22 that "This type of assembly is possible on all metallic materials, no matter what the thickness of the plates, it being obviously indispensable to respect the dimensional proportions of the parts defined hereinbefore." Therefore, one of ordinary skill in the would have found it obvious to laser weld the rotor assembly taught by Dimberg, in view of the teachings of Havard et al. and the benefits gleamed from using laser welding versus other welding techniques (see also col. 4, lines 11-36 where Dimberg describes the benefits of using laser welding).

Conclusion

6. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

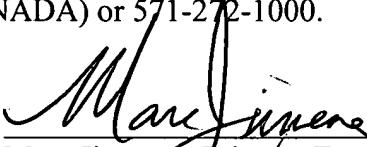
Interviews After Final

7. Applicant note that an interview after a final rejection will not be granted unless the intended purpose and content of the interview is presented briefly, in writing (the agenda of the interview must be in writing) to clarify issues for appeal requiring only nominal further consideration. Interviews merely to restate arguments of record or to discuss new limitations will be denied. See MPEP 714.13 and 713.09.

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Marc Jimenez whose telephone number is (571) 272-4530. The examiner can normally be reached on Monday-Thursday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Bryant can be reached on (571) 272-4526. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.



Marc Jimenez
Marc Jimenez, Primary Examiner
Art Unit 3726

MJ
10-19-06